

**DOCUMENTATION IN SUPPORT OF  
A FINDING OF NO ADVERSE EFFECT  
FOR  
SR 141/SR 100 INTERSECTION IMPROVEMENTS  
NEW CASTLE COUNTY, DELAWARE**

State Contract No. 23-106-01  
Federal Aid No. STP-N267(6)

prepared for

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## **1. Description of the Undertaking**

### **1.1 Introduction**

Through the Federal Highway Administration (FHWA), this report presents the results of the effects assessment conducted by the Delaware Department of Transportation (DelDOT) in consultation with the Delaware State Historic Preservation Officer (SHPO) and Consulting Parties for the proposed SR 141/SR 100 Intersection Improvements in New Castle County, Delaware. Since the proposed undertaking will be federally funded by FHWA, the project must comply with Section 106 of the National Historic Preservation Act of 1966, as amended, and the implementing regulations contained in 36 CFR 800. The intent of this report is to demonstrate that FHWA and DelDOT are in compliance with the regulations governing historic properties as outlined in Section 106. Section 106 requires federal agencies to take into consideration the effects of the proposed undertaking on historic properties and, in consultation with the SHPO and other consulting parties, seek ways to avoid, minimize, or mitigate adverse effects.

In accordance with implementing regulations of Section 106 (36 CFR 800) this report documents FHWA's actions of the project undertaking. This report also intends to identify and describe historic properties that may be affected by the undertaking, assess the effects of the project undertaking upon historic properties, discuss ways in which adverse effects were avoided and effects minimized, and concludes that adverse effects were not found applicable under 36 CFR 800.5(b). Lastly, this report documents involvement with consulting and interested parties in project development, including Section 106 consultation.

### **1.2 Description of the Project**

The proposed undertaking includes construction of roadway and transportation improvements, other associated intersection pavement and design elements, and landscaping enhancements within the SR 141/SR 100 intersection project area. The proposed SR 141/SR 100 Intersection Improvements are shown in Figures 1 and 2. They include the following specific actions:

- Lengthening of second westbound SR 141 through lane approximately 1,400' (from SR 100 toward the Tyler McConnell Bridge)
- Lengthening of westbound SR 141 left turn lane to southbound SR 100 from 225' to 450'
- Lengthening of eastbound SR 141 left turn lane to northbound SR 100 from 290' to 600'
- Construction of a typical 20' wide median (10' for landscaping & 10' for turn lanes) from east of SR 52 to east of Old Barley Mill Road
- Construction of a signalized double right turn from southbound SR 100 to westbound SR 141 (converts one existing southbound through lane)
- Construction of a dedicated left turn lane from SR 141 to Old Barley Mill Road
- Construction of a raised median along SR 100, south of SR 141 (eliminates the movement from the northbound SR 100 to westbound SR 141, available at SR 52 and prevents left turns from the northern exit from Saint Joseph)
- Construction of new sidewalk along the west side of SR 100 from The Ponds at Greenville to Saint Joseph on the Brandywine

2.

THE PONDS  
AT GREENVILLE

ST. JOSEPH ON THE BRANDYWINE  
LOWER CEMETERY

100 MONTCHANIN ROAD

- HISTORIC PROPERTY BOUNDARY

### HISTORIC PROPERTY

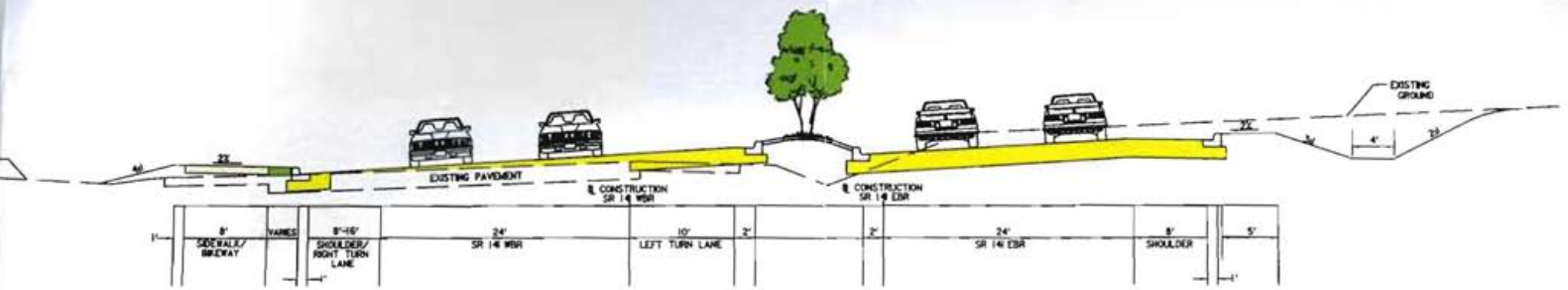
ST. JOSEPH ON  
THE BRANDYWINE

- EXISTING TREE STAND TO  
REMAIN - FENCING TO BE  
PLACED AROUND TREE STAND  
DURING CONSTRUCTION

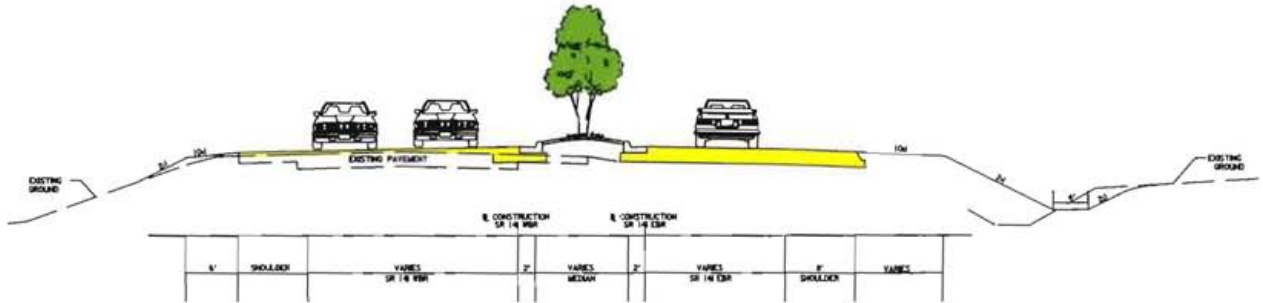
BIKE /PEDESTRIAN PATH (TO BE CONSTRUCTED WITH SHORT-TERM IMPROV  
AND CONNECTED TO EXISTING SIDEWALK AT SR 521)



# SR 141 TYPICAL SECTIONS

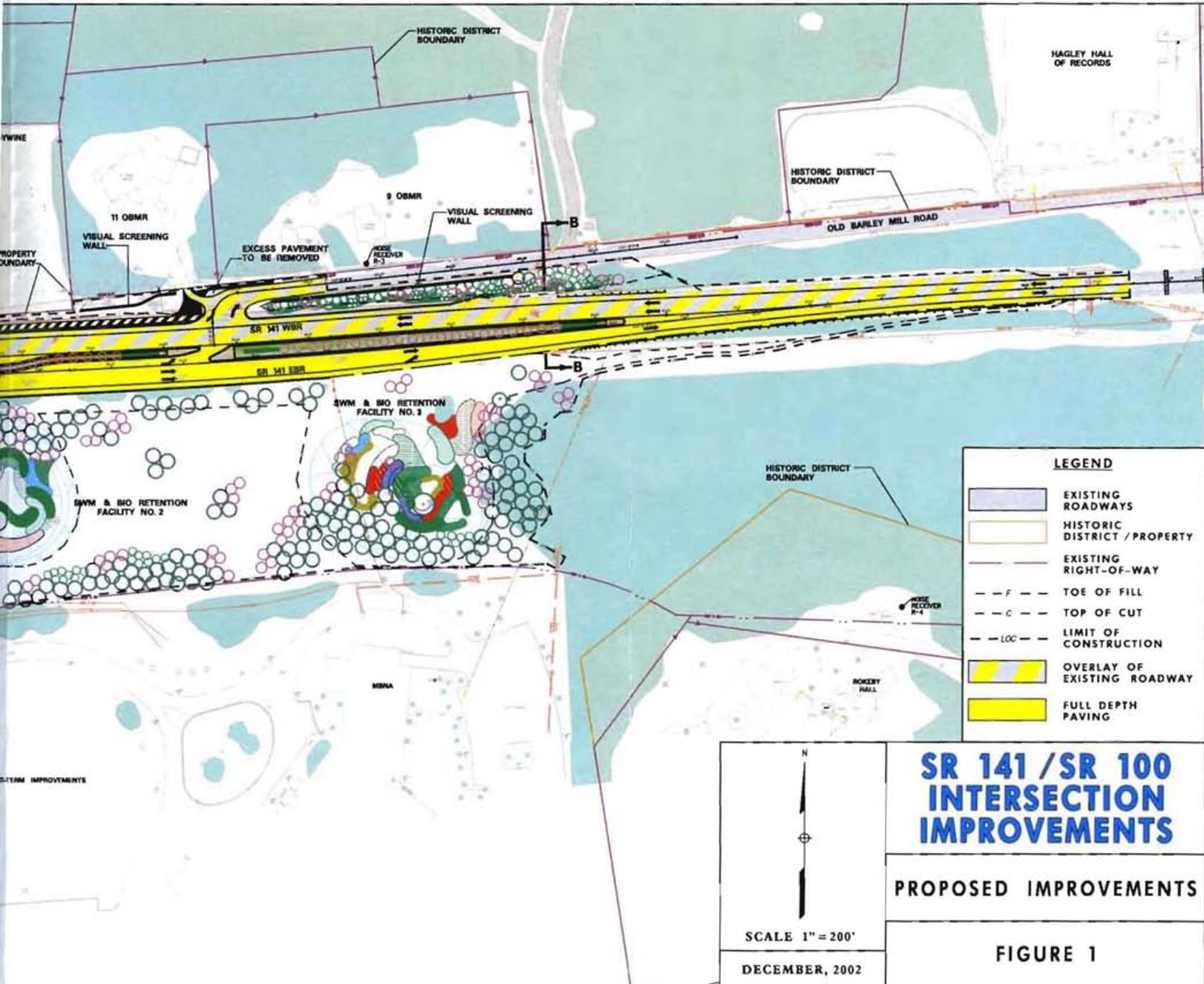


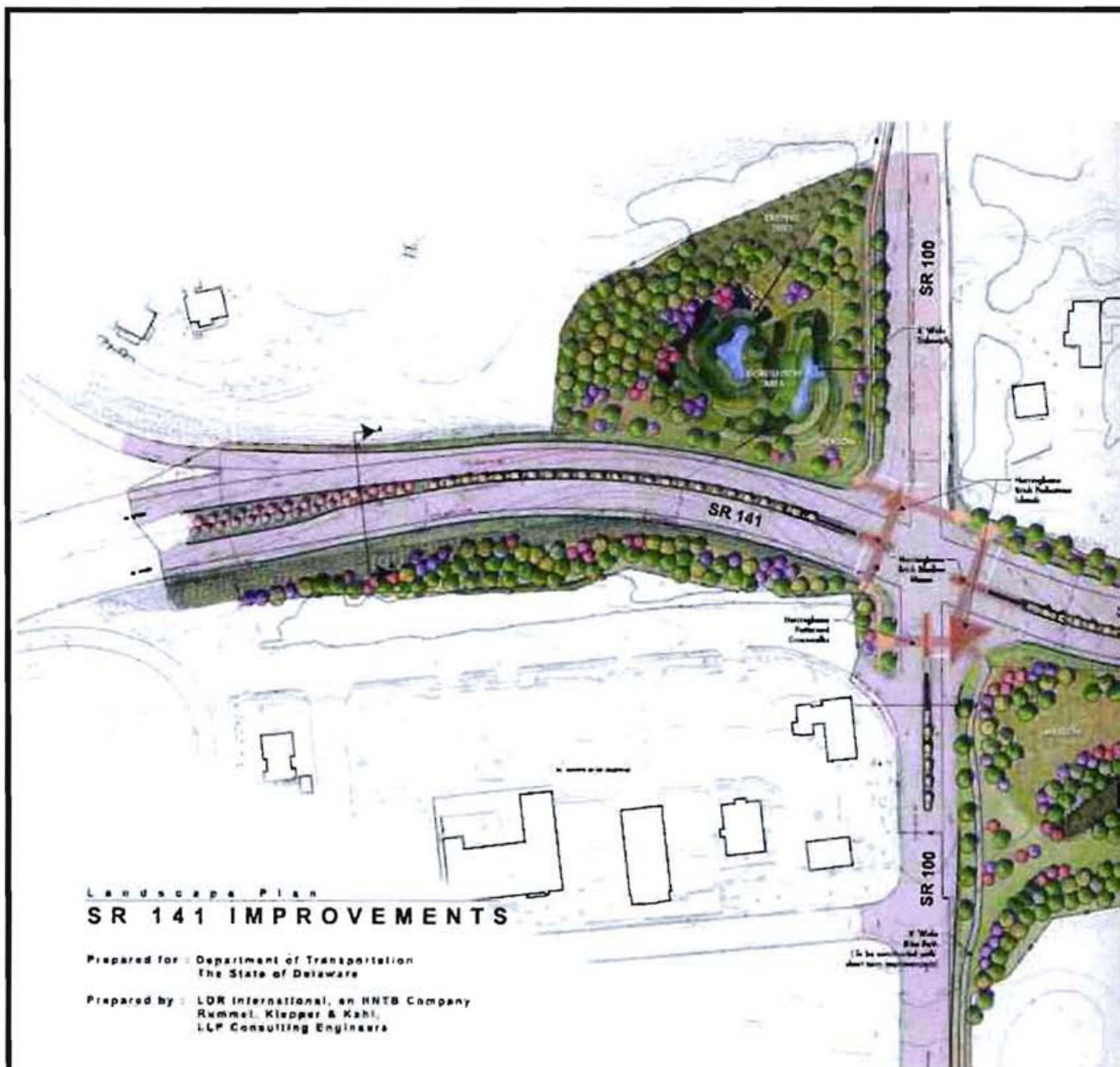
SR 141 - Section A-A



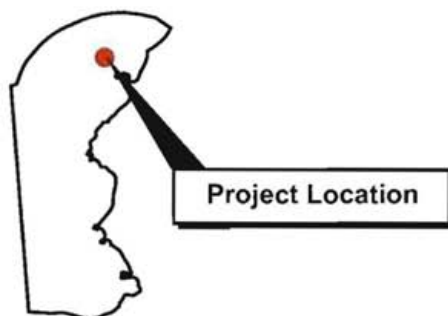
SR 141 - Section B-B

NOT TO SCALE





### New Castle County, Delaware







**SR 141 / SR 100  
INTERSECTION IMPROVEMENTS**

**Landscaping Plan  
for Proposed Improvements**

Date  
**December, 2002**

Scale  
**NOT TO SCALE**

Figure  
**2**

- Construction of a new sidewalk/bikeway along the north side of SR 141 from SR 100 to Old Barley Mill Road
- Construction of a new sidewalk/bikeway along the east side of SR 100 from SR 141 to SR 52
- Construction of crosswalks and pedestrian signals on all four legs of the SR 141/SR 100 intersection with pedestrian refuges provided within the proposed medians
- Construction of stone screening walls and landscaping between westbound SR 141 and Old Barley Mill Road
- Construction of extensive landscaping along SR 141 and SR 100 and within the SR 141 medians
- Construction of aesthetically treated and context sensitive intersection islands, crosswalks, signalization poles and roadway lighting
- Construction of three storm water management facilities through rehabilitation of an existing facility in the northwest quadrant of SR 141/SR 100 and construction of two new facilities in the southeast quadrant of SR 141/SR 100

### *1.3 Area of Potential Effects*

As part of the initiation of consultation under Section 106, DelDOT via the FHWA and in cooperation with the Delaware SHPO defined an area of potential effects (APE). According to Section 106 regulations:

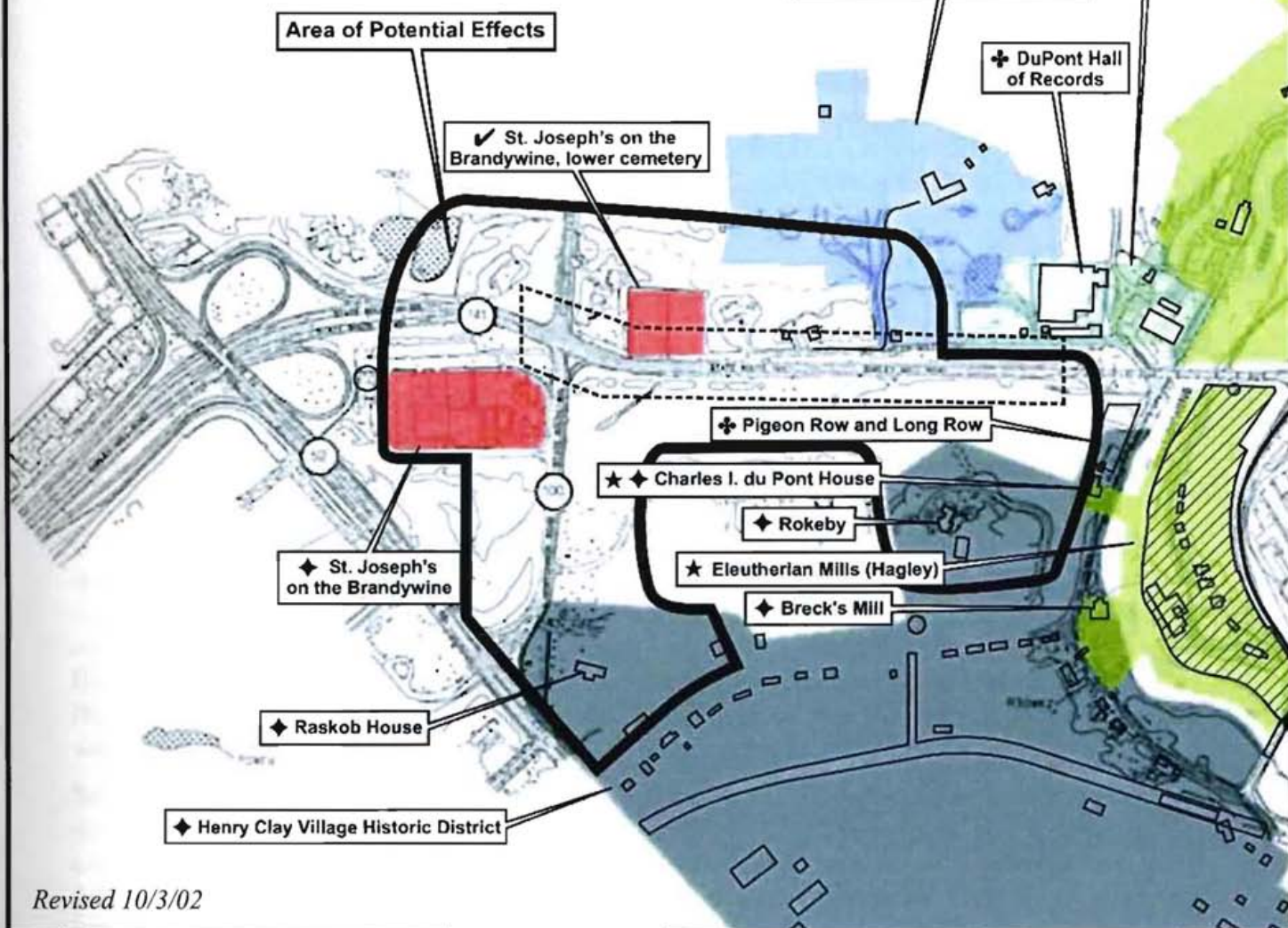
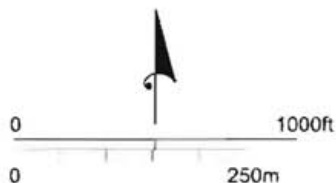
Area of potential effects means the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking (36 CFR 800.16[d]).

The APE for the proposed SR 141/SR 100 Intersection Improvements is shown in Figure 3. It encompasses the roadway corridors of SR 141 between SR 100 and the Tyler McConnell Bridge and SR 100 between SR 141 and SR 52. It includes three historic properties: Saint Joseph on the Brandywine on the west (including lower cemetery), Henry Clay Village/Brecks Mill Area Historic District (which involves the Raskob House and Rokeby Hall properties) on the south, and a portion of 5 Old Barley Mill Road (a.k.a. Samuel Hallock duPont Estate) on the north. In summary, the APE for this undertaking is defined to include areas of physical impact as well as any indirect areas of visual, audible and atmospheric impact.



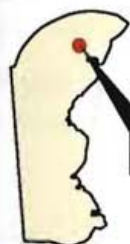
- ★ Listed in National Historic Landmarks Survey
- ◆ Listed in National Register
- ✦ Determined Eligible for National Register
- ✓ Recommended Eligible for National Register
- ✧ Presumed Eligible for National Register

Note: Resource names and boundaries were taken from registration forms on file at the State Historic Preservation Office in Dover. Resource boundaries are indicated by shading.



Revised 10/3/02

New Castle County, Delaware



Project Location

SR 141 / SR 100  
INTERSECTION IMPROVEMENTS

Area of Potential Effects (APE)

Date  
December, 2002

Scale  
0 1000 ft  
0 250 m

Figure  
3

#### *1.4 Project Background*

The proposed SR 141/SR 100 Intersection Improvements have their origin in a larger transportation improvement project of the SR 141 corridor from SR 100 to U.S. Route 202, and more recently, the SR 141: SR 100 to Alapocas Drive. The FHWA, in accordance with the National Environmental Policy Act (NEPA) and 23 CFR 771, completed an Environmental Assessment (EA), Section 106, and Section 4(f) Evaluation for the larger corridor in 1992. This larger study encompassed the limits of the present study. As a result of the larger study, FHWA issued a finding of no significant impact (FONSI) on August 21, 1992. A Memorandum of Agreement (MOA) for Section 106 compliance needs had also been executed. However, the project was never carried forward in its original form.

In the years following the 1992 FONSI, two transportation projects were implemented in the vicinity of the present project that applied to the larger SR 141: SR 100 to Alapocas Drive project.

- In 1997 a project to improve SR 141 between Rockland Road and U.S. Route 202 was completed. It involved a grade separation of the SR 141/Rockland Road intersection, an alignment shift of SR 141 from Rockland Road to U.S. Route 202, and improved intersections with Childrens Drive (providing access to A.I. DuPont Institute), the entrance to AstraZeneca, and U.S. Route 202.
- In addition, a project to improve U.S. Route 202 between Augustine Cut-off and SR 141 was completed. The alignment of U.S. Route 202 was shifted slightly to eliminate numerous minor curves, additional capacity was added at the Route U.S. 202/Foult Road and U.S. Route 202/SR 141 intersections, and southbound transit “diamond” lanes were added between the two intersections. These improvements, as well as recently approved development expansion in the SR 141 corridor, prompted FHWA and DelDOT to review traffic conditions in the project area and reconsider the need for improvements. On June 4, 1998 FHWA concurred that the 1992 FONSI remained valid.

On October 5, 2000 DelDOT informed FHWA that the 1992 project was being reinitiated, noting that since the earlier study the existing Tyler McConnell Bridge had been determined eligible for listing in the National Register and that approved development in the region indicated a need to review traffic conditions in the project corridor. DelDOT proposed to prepare a Supplemental Environmental Assessment (SEA) and reinitiate Section 106 consultation to address the revised National Register status of the existing bridge and present current information on traffic, socioeconomic, cultural, land use, and natural resources in the project corridor.

Recently, FHWA and DelDOT proposed that the SR 141/SR 100 Intersection Improvements be separated from the SR 141: SR 100 to Alapocas Drive project. The purpose of this action is to expedite the completion of intersection improvements that are needed to address operational deficiencies at the SR 141/SR 100 intersection. These improvements are intended to improve capacity and operations of the SR 141/SR 100 intersection, thus maximizing the capacity and traffic flow of the existing Tyler McConnell Bridge. Future efforts to increase the capacity of the Tyler McConnell Bridge are presently being addressed as a separate project undertaking.

As part of an independent project break-off, DelDOT through FHWA formally re-initiated Section 106 consultation for the SR 141/SR 100 Intersection Improvements with the SHPO in a

letter dated October 8, 2002. In an October 11, 2002 response, the SHPO agreed to address the project as a separate or independent undertaking, acknowledged the body of work that has preceded the re-initiation letter, and concurred with the proposed Area of Potential Effects (APE) for the project.

As such, the proposed undertaking establishes the criteria specified in FHWA regulations for an independent project: (1) logical termini, (2) independent utility, and (3) not limiting consideration of alternatives for reasonably foreseeable transportation projects (23 CFR 771.111[f]).

In summary, the "termini" for the SR 141/SR 100 Intersection Improvements are essentially the intersection itself and the adjoining roadway sections. The project does not include any portion of the Tyler McConnell Bridge or its approaches. The SR 141/SR 100 Intersection Improvements serve an existing need for expanded capacity at the SR 141/SR 100 intersection, and thus possess independent utility. The SR 141/SR 100 Intersection Improvements would not bias or limit in any way the choice among alternatives for reasonably foreseeable future transportation improvements.

## **2. Description of Steps to Identify Historic Properties**

Section 106 regulations define a historic property as any prehistoric or historic district, site, building, structure, or objects included in, or eligible for inclusion in the National Register. No distinction is made between properties that have been formally determined eligible and other properties that meet National Register criteria (36 CFR 800.16[l]).

Steps to identify historic properties were originally undertaken as part of the larger SR 141: SR 100 to Alapocas Drive (Tyler McConnell Bridge) project. As part of that project development and Section 106 process, a Cultural Resource Management Document had been prepared by John Milner Associates, Inc. for FHWA and DelDOT (Catts and Everett 2001). The report summarized results of previous investigations and identified additional needs with respect to the identification and evaluation of historic architectural or archaeological properties under 36 CFR 800.4. As part of this scoping effort, the Delaware Cultural Resource Survey (CRS) Inventory, the National Register files, and the Historic American Buildings Survey and the Historic American Engineering Record (HABS/HAER) files were examined to determine if any historic properties within or directly adjacent to the area of potential effects had been further documented since the earlier report (Taylor et al. 1989) was completed. Reports of previous historic architectural investigations in the vicinity of the area of potential effects were examined.

In consultation with the SHPO and identified consulting parties, FHWA and DelDOT undertook a field survey to locate previously identified historic architectural properties. In addition, previously unidentified properties that met the National Register 50-year age consideration with defining significance and integrity requirements were also identified. One property not previously documented, 5 Old Barley Mill Road (a.k.a. Samuel Hallock duPont Estate), appeared to meet National Register of Historic Places criteria. It was assessed and recorded on National Register Registration Forms. The SHPO later concurred with the property's eligibility during Section 106 consultation and within a letter of correspondence dated August 8, 2001.

Although the larger Cultural Resource Management Document for the SR 141: SR 100 to Alapocas Drive (Tyler McConnell Bridge) revealed that many historic properties, structures,



districts, and sites do exist, they are numerically limited or remotely present within the APE for this specific undertaking.

### **3. Description of Affected Properties**

As a result of previous steps to identify historic properties, three historic properties were identified within the present APE for this undertaking. Each is addressed below and shown in Figures 1 and 3.

#### **3.1 *Saint Joseph on the Brandywine***

Saint Joseph on the Brandywine (N-1256; HABS DE-299) was listed in the National Register on November 7, 1976 under Criterion B in the area of religion and social/humanitarianism for the efforts of the du Pont family and under Criteria Consideration A as a religious property deriving its primary significance from its historical importance.

The parish was organized in 1841 by the DuPont Company to meet the religious needs of Irish and Italian Catholic employees. In 1850 Amelia du Pont helped establish a convent on the site. Funds from the du Pont family also made possible the rebuilding of the church and rectory after they were destroyed by fire in 1866 and the updating of the church for its consecration in 1894. Later alterations to the church included a 1941 renovation and a 1950 enlargement of the sacristy. The former schoolhouse was replaced with a twentieth century building (Norton 1976a; KFS 1996c).

An additional cemetery was added to the parish in 1885. The lower cemetery, as it is known, is located on a separate parcel on the north side of SR 141 east of SR 100. The stone walls around this cemetery were added in the 1930s by S. Hallock du Pont, who owned the land adjacent to these two sides (Longworth and McNinch 1995:61). The lower cemetery was not included within the 1976 National Register boundaries. As with other resources at Saint Joseph (church, convent, and upper cemetery), the walls of the lower cemetery were constructed as a result of the efforts of the du Pont family. As the church was associated with the DuPont Company and the du Pont family from the time of its establishment to the relocation of the DuPont Company powder manufacture in the 1920s, the lower cemetery is recommended as a contributing resource of the National Register property.

The significant characteristics and historic boundary of the property include the physical fabric of the church and convent, as well as the surrounding lawn and upper cemetery. They also include the lower cemetery and surrounding wall. The setting and relative locations of the church/convent parcel and the lower cemetery parcel are also important to an understanding of the property.

#### **3.2 *Henry Clay Village Historic District***

Henry Clay Village Historic District (N-333; Breck's Mill Area Amendment) is listed in the National Register under Criterion A for its association with nineteenth-century American industry and development of the DuPont Company and under Criterion C as an example of an industrial village with high style and vernacular buildings that illustrate the construction skills of the industrial workers (Thompson 1986:8-1). The district boundary was revised on January 25, 1988 to include houses on Rising Sun Lane and Kennett Pike that historically had been

considered part of the Henry Clay Village and exclude formerly open areas that had been filled in with modern buildings (Thompson 1986; National Register 1989:98).

The district, which is also partially within the Breck's Mill Area historic district, includes many individually recognized historic buildings within its boundaries. Among them are Raskob House, Rokeby Hall, Charles I. duPont House (N-1236; HABS DE 66), and Breck's Mill. The district also includes a school, several churches, a tavern, stores, and numerous dwelling houses. Many of the houses in the industrial village located along the Brandywine River were constructed by nearby textile mill owners for themselves and their workers. In the nineteenth century the village became part of the DuPont black powder operation.

Raskob House and Rokeby Hall are the two major contributing resources of the district located within the area of potential effects. Raskob House was built in 1920 as the home of William F. Raskob, Secretary of E.I. DuPont Company and brother of John J. Raskob, Vice President of the company. The house is Classical Revival in style, marked by a large, semi-circular porch with columns on the main façade. Other ornamentation includes dentiled cornices, multi-paned windows, and keystone headers. A significant outbuilding, a garage/utility building/greenhouse, stands between the house and Breck's Lane (Thompson 1986).

Rokeby Hall is a Greek Revival-style country house, built in 1836 for Gabrielle Josephine du Pont. Gabrielle was the wife of William Breck. According to family tradition, this house was to be a copy of Louviers, another du Pont house on the opposite side of the Brandywine. Rokeby Hall has been the home of several generations of the du Pont family. The house has a two-story main façade with a small entrance portico, supported on Ionic columns with plinths. Two bays open onto a large, two-story portico overlooking the Brandywine. This portico was enlarged by Alice du Pont Wilson in 1911. There are no significant outbuildings associated with this property (Thompson 1986).

The significant characteristics of the historic district include the physical fabric of contributing buildings and sites, as well as the lawns, roadways, and open areas that link these elements. The setting of the district is a significant characteristic as it conveys the aspects of feeling and association with the area's historical development.

### 3.3 5 Old Barley Mill Road (a.k.a. Samuel Hallock duPont Estate)

The Samuel Hallock duPont estate is significant under Criterion A as a representative example of the country estate that emerged in northern Delaware in the late 1920s and 1930s and under Criterion C as a representative example of the work of prominent restoration architect Richardson Brognard Okie. The property retains several characteristic features of the country estate, including a main house, gate house, ice house, smoke house, pump house, bridge, wood shed/work shop, tennis courts, pond, stone walls, and dog kennel foundations. Each of these features is set amidst a natural English landscape (Everett 2001). The area of potential effects includes the immediate entry wall and gates, the stone gatehouse, a stone arched bridge, and a portion of the landscaped lawn and driveway along Old Barley Road. The gatehouse and wall entry are located immediately north of Old Barley Mill Road. Stone walls adjoin the façade of the gate house on either side. An opening in the wall leads to a small entry porch on the west elevation. A large stone chimney rises above the northeast corner of the roof, alluding to a corner fireplace inside.

The significant characteristics of the property include the fabric of various buildings and structures, as well as the lawns and open spaces that provide their physical context. The setting of this property is also significant as it conveys the aspects of feeling and association with an early twentieth century country estate.

#### **4. Description of the Effects of the Undertaking on Historic Properties**

The effects that a proposed undertaking will have on a historic property are predicted based on the distinguishing characteristics of the resource and the design and anticipated consequences of the undertaking. Since the proposed undertaking would not involve physical alterations within the boundary of any historic property, only changes introduced in the visual, atmospheric, or audible setting of historic properties were considered. Of the three identified historic properties within the APE, Saint Joseph on the Brandywine (including lower cemetery), Henry Clay Village Historic District, and 5 Old Barley Mill Road (a.k.a. Samuel Hallock duPont Estate), setting is a significant characteristic of each. The proposed undertaking would have an effect on each of these properties.

##### **4.1 Saint Joseph on the Brandywine**

With regard to Saint Joseph on the Brandywine, the undertaking will involve widening of the SR 141 roadway paving adjacent to the north and east boundaries of the property located in the southwest quadrant of the SR 141/SR 100 intersection. The undertaking will require removal of some trees located at the southwest intersection corner within the state right-of-way to offset this travel lane expansion. Replacement trees and shrubs will be planted in an informal manner (i.e. not in a landscape design or pattern) in this same area and adjacent areas of the southwest quadrant of the intersection. The median of SR 141 west of SR 100 will be widened and planted with trees, understory shrubs and turf, edged with a 16" splash block and curbing. These changes will alter the views of the roadway from the church property and vice versa.

In addition, sidewalks/pathways, crosswalks, medians, and refuge islands will be constructed adjacent to the Saint Joseph on the Brandywine property, including the lower cemetery, within and adjacent to the intersection of SR 141/SR 100. Crosswalks at the intersection will be delineated with textured and colored asphalt in a herringbone pattern and flanked by 24" wide white thermoplastic striping. Refuge islands will be defined by concrete curbing and paved with concrete pavers in a random rectangular (Hanover "K") pattern in warm colors. Walkways within the islands will be paved using a wire cut paver brick (dark red blend) in a herringbone pattern. Proposed sidewalks/pathways will vary in width as indicated on the plan sheet drawings and will be paved in light beige colored concrete, similar to the concrete colors and treatments used in other historic areas of the state. The changes will affect the view of the intersection from the church and cemetery.

A concrete median will be installed in SR 100 south of SR 141. The median will be defined by concrete curbing and paved with concrete pavers in a random rectangular (Hanover "K") pattern on the nose of the median. Turf and trees will be planted in the median, edged with a 16-inch splash edge of brick. This will alter traffic patterns within the church property by prohibiting illegal left turns from the church onto northbound SR 100.



#### *4.2 Henry Clay Village Historic District and 5 Old Barley Mill Road*

With respect to Henry Clay Village Historic District and 5 Old Barley Mill Road (a.k.a. Samuel Hallock duPont Estate), roadway widening will occur along SR 141 to the south side of the roadway. A 20-foot wide median will be installed. A dedicated left-turn lane will be constructed from SR 141 to Old Barley Mill Road. These roadway improvements will occur in the vicinity of both historic properties. The design of the improvements includes landscaping, screening, and stormwater management facilities.

Henry Clay Village Historic District is to the south of the improvements area; improvements will result in the roadway being ten feet closer to the village boundary (from 240 feet to 230 feet) and the closest building within the district (Rokeby Hall; from 520 feet to 510 feet).

Landscaping will be installed to the south of the intersection and roadway construction (adjacent to the Henry Clay Village Historic District). Trees and low shrubs and grass will be planted within the median of SR 141. Plantings will take place in the meadow area to the south of the roadway to provide a naturalized setting for two new stormwater management areas. A variety of native trees, evergreens and shrubs are proposed, and a mixture of wildflowers and native tall grasses are proposed as groundcovers in the meadow. Sidewalks and pathway extensions will be incorporated along northbound SR 100 extending from the SR 52/SR 100 intersection and along Old Barley Mill Road (adjacent to Rokeby). These project elements will alter limited views of SR 141 from the district.

North of the SR 141 roadway, stone walls and landscaping are designed to frame the entrance to Old Barley Mill Road. Designed with input from the residents and community, landscape treatments between SR 141 and Old Barley Mill Road include a variety of plant materials that will blend into the setting. These improvements will alter the view from SR 141 to 5 Old Barley Mill Road and vice versa.

#### **5. Explanation of Why the Criteria of Adverse Effect Were Found Inapplicable**

Under 36 CFR 800.5, DelDOT through FHWA and in consultation with the SHPO and consulting parties, applied the criteria of adverse effect to Saint Joseph on the Brandywine, Henry Clay Village Historic District, and 5 Old Barley Mill Road (a.k.a. Samuel Hallock duPont Estate). However, a finding of No Adverse Effect was found and determined under 36 CFR 800.5(b).

According to the of Adverse Effect Criteria formulated by the Advisory Council on Historic Preservation:

An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative (36 CFR 800.5 [a] [1]).

Adverse effects on historic properties include, but are not limited to:

- (i) Physical destruction of or damage to all or part of the property;
- (ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines;
- (iii) Removal of the property from its historic location;
- (iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;
- (v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;
- (vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and
- (vii) Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance (36 CFR 800.5 [a] [2]).

Except for item (v), each of these circumstances can be categorically removed from consideration. Specifically, the proposed undertaking would not cause physical destruction of or damage to all or part of a property, alteration of a property, removal of a property from its historic location, change of the character of a property's use or of physical features within the property's setting, neglect of a property which causes its deterioration, or transfer, lease, or sale of a property out of Federal ownership or control.

With respect to item (v), the proposed undertaking would consist solely of improvements and landscaping within the existing roadway intersection corridor and existing right-of-way. Therefore, proposed changes would be remarkably consistent with existing conditions and land uses (Figures 1 and 2). The proposed undertaking will introduce visual, atmospheric, and audible elements that could diminish the integrity of the properties' setting. The proposed changes, however, are not considered adverse since they do not meet the criteria defined under paragraph (a)(1) under 36 CFR 800.5. In short, the project undertaking effects will not alter, directly or indirectly, any of the characteristics of the historic properties that qualify them for inclusion in the National Register in any manner that would diminish their integrity.

The visual, atmospheric and audible elements are discussed separately below.

### *5.1 Visual Elements*

As a result of implementation of this undertaking, the roadway of SR 141 will be widened adjacent to the historic resources for improved intersection operations. Sidewalks, cross walks, lighting, medians, and stormwater management facilities are also integral parts of the overall improvements for the SR 141 and SR 100 junction. Based on existing roadway conditions, transportation improvements are not out of character with project area and do not radically alter

the project area and APE with major infrastructure improvements. Specific elements and materials introduced are also compatible with the project area.

The intent of the additional hardscape and landscape enhancements is to visually blend the transportation improvements into the existing setting through the use of native rock, trees and shrubs planted informally, both adjacent to the roadway and within the overall affected site. Specific landscape treatments or other measures are outlined below and in Figure 2.

#### SR141/SR 100 Intersection: Saint Joseph on the Brandywine Church

Informal tree plantings in this area have been designed to supplement the existing second growth hedgerow and provide an expanded landscape buffer adjacent to Saint Joseph on the Brandywine. Deciduous and flowering trees are indicated for this area. Tall grasses will be maintained in this area to reinforce a naturalized appearance.

#### SR141/SR 100 Intersection: Saint Joseph on the Brandywine Lower Cemetery

Street trees are recommended on both sides of the proposed concrete walk near the intersection and adjacent to the cemetery. This treatment will reinforce the street tree approach used in other site areas adjacent to SR 141 and SR 100.

#### SR141/SR 100: North and West of Henry Clay Village Historic District

Landscape improvements in this portion of the proposed undertaking are designed to: 1) frame views to the adjacent meadow area; 2) provide an intermittent informal canopy near the roadway; 3) visually reinforce the existing deciduous hedgerow; and 4) provide buffering of views beyond the project area. In addition, plantings in this portion of the project area will provide a naturalized setting for two new stormwater management areas. A variety of native trees, evergreens and shrubs are proposed. A mixture of wildflowers and native tall grasses are proposed as groundcovers in the meadow.

#### Areas Adjacent to Old Barley Mill Road

Special landscape treatments are recommended in this portion of the proposed undertaking to provide buffering from the roadway for the single-family residences along Old Barley Mill Road, including 5 Old Barley Mill Road, and provide a sense of “gateway” for the historic Hagley Museum, a historic property close-by, but not within the APE. Stone walls and landscape plantings are included east and west of the Old Barley Mill Road to frame the entrance area. The landscape plantings will serve to blend existing and new stone walls into the area setting. Native rock will be used for the new low level screening walls that are both decorative and functional. As existing stone walls already characterize Old Barley Mill Road (including 5 Old Barely Mill Road), the new walls are of compatible materials and will closely match the existing walls. They will not diminish the integrity of the surrounding area or of historic properties.

#### Treatments in Medians

Curbed and landscaped medians have been integrated into the overall roadway improvements to provide a more aesthetic feel to the roadway and promote a boulevard appearance for the roadway. Typically, the proposed medians range in width from 10 feet to 20 feet, except at the west end of the project area, where a segment of the median expands to approximately 40 feet wide. Ornamental trees are proposed for the length of these medians except near intersections where sight distance requirements preclude them. The trees will be interspersed with a lower



story of evergreen groundcover and flanked by turf. Additional low plantings will be provided near intersections. A 16-inch wide brick “splash edge” is proposed along both sides of all proposed medians to reduce maintenance requirements and provide an attractive edge.

### Summary of Visual Effects

Overall, the proposed roadway widening, non-motorized transportation elements, and other intersection improvements are not expected to introduce visual elements that diminish the integrity of any property’s setting or historic significance. The landscape and hardscape elements of the project undertaking are designed to provide visual buffer from the expanded roadway. No private property acquisition is necessary as visual improvements and components lie within existing right of way.

Saint Joseph on the Brandywine (church/convent parcel) will be situated between 30 and 200 feet from the proposed roadway, which closely approximates the existing roadway. Between the property and the roadway is a buffer of landscaping, which closely approximates the existing vegetation. Proposed immediately adjacent to the lower cemetery parcel will be an 8-foot-wide sidewalk and landscaping, which parallels the westbound lanes of SR 141. On the whole, however, the visual relationship between the church/convent parcel and the lower cemetery parcel would remain similar to existing conditions. Construction of intersection pedestrian elements (sidewalks, crosswalks, medians, pedestrian refuges) will enhance the connectivity between the two properties.

In all, visual changes in the vicinity of the church and cemetery will not result in changes in the properties’ historic setting or significance. In this regard, the landscape and transportation enhancements are an integral part of the overall compatible improvements for SR 141 and SR 100. The intent of the project is to visually blend the transportation improvements into the landscape within the existing setting and enhance the settings through the use of native trees and shrubs planted both adjacent to the roadway and within the overall project area.

In the Henry Clay Village Historic District, the closest contributing properties to the undertaking are Rokeby Hall (approximately 500 feet from SR 141) and Raskob House (approximately 500 feet removed). Between the roadway and the district properties is an approximately 300-foot-wide landscaped area that will be enhanced with additional plantings. Although portions of the existing SR 141 roadway can be remotely seen from the Henry Clay Village Historic District, the introduction of additional pavement will not introduce adverse visual elements. Due to distance factors and topographical differences within the existing setting of woods, hedgerows and meadow, visual elements introduced with the undertaking are outside of the character of the defining features (i.e. contributing historic elements) within the district.

5 Old Barley Mill Road (a.k.a. Samuel Hallock duPont Estate) will remain approximately 60 feet removed from roadway improvements. However, the view from the property toward the roadway will be partially blocked by new landscaping and a visual screening stone wall. Based on visual assessment of effects, it is these same landscaping and screening features that constitute the visual effect introduced by the project. Based on the location, setback, setting and function of the Samuel Hallock duPont Estate, the landscaping and stone wall screening measures are visual elements added in such a manner that will not alter, directly or indirectly, any characteristics of the property that qualify it for inclusion in the National Register. These new visual elements, remotely viewed from the property’s contributing features near Old Barley Mill Road, will not

diminish the integrity of the property. This effect is not considered adverse. Rather, the new landscape elements would enhance the setting of the estate.

In each case, Saint Joseph on the Brandywine, Henry Clay Village Historic District and the Samuel Hallock duPont Estate, the visual changes to the property are considered enhancements and are not expected to alter the setting, function, use, or physical elements of the historic property. No work or features of the undertaking lies within the confines of the historic property or diminishes the integrity and/or significance of the property. Furthermore, the use of materials, design, landscaping and hardscaping features are compatible with existing natural and man made features that are within character and context of the project area and of the historic properties.

## *5.2 Atmospheric Elements*

The proposed undertaking is not expected to introduce atmospheric elements that diminish the integrity of any property's setting. In the project area, air quality receptors for localized analysis were placed in the identical locations as noise receptors (see 5.3 below).

The intersection improvement project area was included in the most recent Delaware State Implementation Plan (SIP), as part of the Wilmington Area Planning Council's (WILMAPCO) Metropolitan Transportation Plan (MTP). The Environmental Protection Agency (EPA) has already provided the State of Delaware with a "letter of adequacy" for the 2005 SIP, a document that provides for lower, stricter targets for air quality analyses.

The SIP is required by the Clean Air Act and the Intermodal Surface Transportation Efficiency Act (ISTEA) and outlines the strategies for achieving and maintaining air quality standards. The MTP demonstrated conformity with applicable air quality budgets as of March 2000, and conformity on the lower 2005 SIP emission targets. Conformity is defined as the extent that a highway project adds or subtracts pollutants from regional emission levels.

In order for the intersection improvement project to conform to the SIP on a local basis, air quality analysis must be conducted that demonstrates that the project will not cause or exacerbate any localized violations of the air quality standards. The only pollutant whose localized effects currently require a detailed impact evaluation is carbon monoxide, and this analysis has been completed. The air quality analysis indicates that carbon monoxide impacts resulting from the implementation of this project undertaking would not result in a violation of the standards at any receptor location in any analysis year.

In summary, the proposed undertaking will not violate any state or national ambient air quality standards, nor effect any changes in atmospheric conditions that may impact any historic resources in the area.

## *5.3 Auditory Elements*

The proposed undertaking is not expected to introduce audible elements that diminish the integrity of any property's setting. Traffic noise modeling was performed in accordance with standard FHWA guidelines and current DelDOT procedures and policies in order to determine noise effects due to the proposed intersection improvements. The modeling results do not include any changes in capacity on the Tyler McConnell Bridge. Results of the modeling indicated noise level increases to noise sensitive receptors within the vicinity of the intersection of 1 decibel (dBA), a minimum increase in noise levels over existing conditions. A 3-dBA

change is the threshold for the human hearing to perceive a change in noise. Noise mitigation measures that provide a minimum 5 dBA reduction in noise were evaluated and found neither reasonable nor feasible due to the need to provide vehicular access to the properties.

#### Noise Impact Thresholds/Activity Relationships

The noise impact thresholds (design noise levels) indicated in Table 1 below have been used to determine highway traffic noise impacts and indicate the need for considering abatement measures associated with different land uses or activities in existence at the time of project design. Existing land uses or activities adjacent to SR 141 between SR 100 and the Tyler McConnell Bridge include residences, church and cemetery. The applicable activity category for churches and residences is "B", for which the hourly equivalent (exterior) design noise level is 67 dBA. Noise levels that approach (are 1 dBA less than) or exceed this design noise level are considered for abatement.

**Table 1. FHWA Noise Abatement Criteria/Activity Relationships in CFR 772**

Activity Category	Noise Impact Threshold $L_{eq}(h)$	Description of Activity Category
A	57 dBA (Exterior)	Land on which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 dBA (Exterior)	Residences, motels, hotels, schools, churches, libraries, hospitals, picnic areas, recreation areas, playgrounds, active sports areas, and parks.
C	72 dBA (Exterior)	Developed lands, properties or activities not included in categories A and B above.
D	--	Undeveloped lands.
E	52 dBA (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

#### Criteria for Determining Noise Impacts

To describe noise environments and to assess impact on noise sensitive areas, a frequency weighing measure that simulates human subjective response to noise is customarily selected. A-weighted ratings of noise sources which reflect the human ear's reduced sensitivity to low frequencies have been found to correlate well with human perceptions of the annoying aspects of noise, particularly from traffic noise sources. Consequently A-weighted noise levels, described in decibels-A (dBA), are the values cited by FHWA in its noise criteria indicated in Table 1.

Most environmental noise fluctuates from moment to moment. To correlate noise environments with community annoyance, a single-number noise descriptor called the equivalent sound level ( $L_{eq}$ ), which characterizes the fluctuating sound, is commonly used. The  $L_{eq}$  is the value or level of a steady, non-fluctuating sound that represents the same amount of acoustical energy over the same period of time. For traffic noise assessment,  $L_{eq}$  is typically evaluated over a one-hour period,  $L_{eq}(h)$ .

## Noise Assessment

The noise analysis was conducted in accordance with standard FHWA guidelines and current DelDOT procedures and policies. The analysis began with the determination of existing noise levels along the project corridor in order to assess the traffic noise contributions on neighboring noise-sensitive areas. Future year (2025) noise calculations and predictions were performed using FHWA-approved methods. The noise predictions were performed with the FHWA Traffic Noise Model (TNM) version 1.1 (FHWA-PD-96-009). Noise measurements were taken in October 2000 at the four locations shown in Table 2. The data were introduced into the noise assessment model. The resulting measured noise levels, predicted worst noise-hour existing noise levels, and projected noise levels are shown in Table 2.

**Table 2. Noise Assessment Summary**

Receptor	Description	Noise Level $L_{eq}$ -dBA		
		Measured Ambient <sup>1</sup>	Predicted Existing <sup>2</sup>	Predicted Future <sup>3</sup>
R-1	Saint Joseph on the Brandywine (Receptor located 15' north of building closest to SR 141/SR 100 intersection, adjacent to iron fence)	64	66	67
R-2	Residence at 100 Montchanin Road (Receptor located 10' north of wooden stockade fence adjacent to SR 141)	65	70	71
R-3	Residence at 9 Old Barley Mill Road (Receptor located 25' south of front of house, just behind stone wall along SR 141)	66	70	71
R-4	Residence (Rokeby Hall) at 175 Brecks Lane (Receptor located near hedgerow at northern edge of property, east of wood stockade fence)	53 <sup>4</sup>	47	48

1 Includes measured noise from all sources, including non-traffic sources.

2 Predicted "loudest hour" traffic noise level.

3 Reflects only changes in intersection roadway with a two-lane Tyler McConnell Bridge.

4 Measurement influenced by non-traffic noise source.

## Noise Impact Assessment and Feasibility of Noise Control

### *Saint Joseph on the Brandywine*

Receptor R-1 represents the Saint Joseph on the Brandywine church, school and cemetery and is located 15 feet north of the nearest building to the intersection (refer to Figure 1). The existing (year 2000) noise level of 66 dBA approaches the noise abatement criteria of 67 dBA for the exterior of schools and churches as established by the FHWA. Future design year noise levels of 67 dBA, based on the intersection improvements described, are predicted to exceed the noise abatement criteria. This represents an increase of 1 dBA. SR 141, SR 100 and SR 52 surround the church complex. To achieve a noticeable reduction of 5 dBA or more, a noise barrier would need to encompass traffic noise from all sources. A barrier of this magnitude would produce an

unacceptable visual effect to the church complex. While a berm may provide a less intrusive visual change, insufficient space is available to consider a berm for this noise sensitive area.

Receptor R-2 is located in the northeast corner of the SR 141 and SR 100 intersection, ten feet north of the wooden stockade fence adjacent to SR 141, and represents one residence, 100 Montchanin Road (refer to Figure 2). The Saint Joseph Lower Cemetery is located east of this receptor site. Existing (70 dBA) and predicted future design year noise levels (71 dBA) exceed the noise abatement criteria (67 dBA).

Receptor R-3 represents two residences along Old Barley Mill Road near the intersection of Old Barley Mill Road and SR 141. The receptor is located 25 feet south of the front of 9 Old Barley Mill Road near the low stone wall adjacent to Old Barley Mill Road (refer to Figure 1). The Saint Joseph Lower Cemetery is located west of the receptor site. Existing (70 dBA) and predicted design year (71 dBA) noise levels exceed the noise abatement criteria (67 dBA).

Receptors R-2 and R-3 may be used to represent the Saint Joseph Lower Cemetery, as the cemetery is located between these two receptors. Existing noise levels for these receptors is 70 dBA, future noise levels are predicted to be 71 dBA with the completion of the intersection improvements. At the cemetery location, there is insufficient space between the existing roadway and the cemetery to consider a berm. The effectiveness of noise abatement at this location would require closing the Old Barley Mill Road entrance on SR 141 and the entrance to the cemetery to achieve a minimum 5 dBA reduction in noise levels. Erection of any noise barrier would also produce an unacceptable visual effect.

#### *Rokeby Hall and Henry Clay Village Historic District*

Receptor R-4, located at 175 Brecks Lane (Rokeby Hall), is representative of residences in the Henry Clay Village Historic District. The receptor is located at the northern edge of the property; the residence itself is approximately 500 feet south of SR 141 (refer to Figure 1). The receptor does not exhibit a noise impact currently nor is a noise impact predicted following completion of the intersection improvements. No mitigation or noise abatement is required.

#### *Raskob House and 5 Old Barley Mill Road*

Remaining contributing elements of Henry Clay Village Historic District (including Raskob House) are significantly far removed from the intersection improvements, approximately 1,300 feet. Under standard procedures, these locations are considered beyond the limit for defining a noise sensitive location within the proposed project corridor, and were not included in the noise assessment study. Additionally, these locations are significantly closer to SR 52 (50 feet to 300 feet) so that noise generated from SR 52, not SR 141, would dominate the traffic noise environment.

5 Old Barley Mill Road, as with Henry Clay Village and Raskob House, is significantly far removed (1,000 feet) from the proposed improvements. Additionally, the direct line of sight from 5 Old Barley Mill Road to SR 141 is through a dense wooded area. As with Henry Clay Village and Raskob House, 5 Old Barley Mill Road is considered beyond the limit for defining a noise sensitive location within the proposed project corridor, and was not included in the noise assessment study.



#### 5.4 Summary

In terms of overall efforts to minimize effects with the project undertaking, during early transportation planning efforts involving Section 106 consultation for the SR 141: SR 100 to Alapocas Drive (Tyler McConnell Bridge) project, a number of alternatives, including sub-options, were evaluated. To achieve the purpose and need of improving operations at the SR 141/SR 100 intersection alternatives ranged from full and partial grade-separated interchanges, multiple lane additions and lengthening, various turning restrictions, and a roundabout for the intersection. Many of those initial options explored would have resulted in adverse or greater effects. Of those design and build options explored during project development and through the Section 106 process, this project undertaking results in the smallest limit of disturbance and least effect. Unlike other alternative options initially studied and presented, the current project has been designed to totally avoid adverse effects and minimize effects to known historic resources.

In collaboration with Section 106 consulting parties, a project Working Group, and in meetings with local residents, program planners and engineers (and FHWA), DelDOT has implemented specific design measures that are intended to avoid adverse effects as well as minimize overall effect. These design measures are summarized, with their locations on the engineering contract documents, in Table 3.

**Table 3. Summary of Proposed Design Measures**

<b><u>Specific Items to be Incorporated into Intersection Improvement Construction Contract Documents</u></b>	<b><u>Contract Documents Sheet Number</u></b>
Design and posted speed of 35 MPH	Sheet 1- Title Block
Provide visual screen wall between SR 141 and residents on Old Barley Mill Road. Wall is to be of stone facing with a stone cap.	Sheets 15-16,102, 106-114*
Width of SR 141 median shoulders 2'	Sheet 7-8
Width of SR 141 outside shoulders 8'	Sheet 7-8
Width of SR 141 turning lanes 10'	Sheet 7-8
Provide SR 141 median landscaping. Ornamental trees with center underplanting of evergreen groundcover (4' wide) and flanked by turf. Additional low plantings near intersections.	Sheets 100-105
Provide 4-way pedestrian crossing at SR 141 / SR 100 with special paving treatment and pedestrian signals. Crosswalks textured, colored asphalt in herringbone pattern, delineated with 24" white thermoplastic striping. Refuge islands of concrete pavers in random Hanover "K" pattern in warm colors. Walkways within islands paved with herringbone pattern cut paver brick (dark red blend).	Sheets 14, 37, 88, 97, 105
Provide sidewalk/bikeway from SR 52 at SR 100 (existing greenway) to SR 100 at SR 141.	Sheets 14, 18
Provide sidewalk (beige colored concrete) from St. Joseph on the Brandywine to The Ponds community entrance, along the west side of SR 100	Sheets 14,19
Provide sidewalk (beige colored concrete) along north side of SR 141 from SR 100 to Old Barley Mill Road – improved pedestrian access to Hagley Museum / Main Street area. Note: Shifts the SR 141 edge of roadway approximately 16' further south of the St. Joseph on the Brandywine lower cemetery	Sheets 14-15

<b><u>Specific Items to be Incorporated into Intersection Improvement Construction Contract Documents</u></b>	<b><u>Contract Documents Sheet Number</u></b>
Provide median and channelizing islands with special aesthetic treatments (concrete curbing, 16" splash edge of brick), developed with input from St. Joseph on the Brandywine, local Communities and Section 106 Consulting and Interested Parties.	Sheets 37-38, 104-105
Protect trees south of SR 141, east of SR 100, that run at 45 degree angle to SR 141 – fence off area during construction.	Sheet 68
Modify and landscape existing pond in northwest quadrant of SR 141 / SR 100. Landscape materials include native shrubs, grasses and herbaceous plants; supplemental plantings of native trees north and west of pond.	Sheets 39-43, 100
Provide landscaping in SR 141 / SR 100 northwest quadrant in addition to landscaping shown in Preliminary Plans along SR 141, along SR 100 and screening Stormwater Management Pond. Materials include native trees in informal pattern.	Sheets 100-101
Provide landscaping along south side of SR 141 from SR 100 to east of Old Barley Mill Road in addition to landscaping shown on preliminary plans. Informal pattern of native tree plantings.	Sheets 101-102
Provide landscaping in SR 141 / SR 100 southwest and southeast quadrants in addition to landscaping shown in Preliminary Plans along SR 141, along SR 100 and screening Stormwater Management Pond. Materials include informal plantings of native tree species. Provides additional screening of roadway from St. Joseph.	Sheets 100-102
Erosion and Sediment Control measures are adjusted to avoid impacts to the existing ditch line as it approaches the western TMB abutment. The Final Plans reflect the revised Limit of Construction (LOC)	Sheets 69, 72
Provide signal, pedestrian and lighting poles with special aesthetic treatments, using specified color, style, etc. Developed with input from St. Joseph on the Brandywine, local Communities and Section 106 Consulting and Interested Parties. Number of lights to be based on DelDOT policy and/or design exception.	Sheets 97-99
New landscaping with selected native tree species in the southwest quadrant to replace removed trees. This will supplement existing hedgerow and expand landscape buffer for St. Joseph. Tall grasses will be maintained.	Sheets 100-101
Landscaping in the northeast quadrant includes street trees on both sides of concrete sidewalk.	Sheet 101
Southeast quadrant landscaping with a variety of native trees. Wildflower mixture and native grasses proposed as meadow groundcover. Plantings to support and naturalize setting of 2 stormwater management ponds.	Sheets 101-102
Areas adjacent to Old Barley Mill landscaped with variety of materials to blend stone wall with setting.	Sheet 102*

\* Third section of wall added on Old Barley Mill Road north of the roadway between entrances to 11 and 9 Old Barley Mill Road. Roadway adjusted slightly south to allow this element to be included.

In summary, the Assessment of Adverse Effects under 36 CFR 800.5 concluded that a finding of No Adverse Effect is applicable to the project. The undertaking's effects, including audible, visual and atmospheric effects, will not alter any of the characteristics or integrity of any of the historic properties within the area of potential effects that qualify them for inclusion in the National Register of Historic Places.

## **6. Views Provided by Consulting Parties and the Public**

### **6.1 Consulting Parties**

In accordance with regulations contained in 36 CFR 800.2, FHWA has identified the following agencies and organizations as consulting parties to the Section 106 process as part of the larger SR 141: SR 100 to Alapocas Drive project: FHWA, SHPO, New Castle County, DelDOT, Advisory Council on Historic Preservation (ACHP), Preservation Delaware, Inc., Hagley Museum, National Trust for Historic Preservation, National Park Service, and Delaware Greenways, Inc. In addition, various local property owners, while not serving as consulting parties, were invited to participate in regularly scheduled Section 106 meetings. When the intersection improvement project was initiated and concurred as a separate undertaking on October 8 and 11, 2002, the same consulting parties and interested parties continued consultation for the SR 141/SR 100 intersection.

Between March 1, 2001 and November 14, 2002, fifteen Section 106 meetings were convened. Of those scheduled meetings, consultation involving intersection improvements for SR 141/ SR 100 had been discussed or had been the main project undertaking during consultation. However, more recently and due to the intersection project break-off, the last three meetings were strictly devoted to the intersection improvements. The purpose of all of the meetings was to discuss efforts to identify and evaluate historic properties, consult on various project alternatives (and eliminate those that did not meet the goals and objectives of the project), assess effects of the undertaking, and to evaluate, determine and concur with the means and/or approaches to avoid or minimize effects.

During early project development of conceptual alternatives and options, a number of grade-separated overpasses and interchanges were considered. The SHPO, consulting parties, and the public expressed concern for impacts not only to the project area, but to historic resources. Consequently, many options and alternatives were quickly dismissed due to their impacts. The current proposal reflects a compromise that meets goals and objectives of the project, while avoiding direct adverse impacts, minimizing harm, and enhancing the project corridor.

### **6.2 Working Group Involvement**

In September 2000, former Secretary of Transportation Anne Canby appointed a Working Group to provide recommendations on the best transportation solutions for SR 141 corridor between SR 100 and Alapocas Drive (which included this undertaking). The Working Group was comprised of 38 members, and included county and state elected officials, representatives of community and neighborhood organizations, local businesses, institutions, and environmental and historic preservation groups.

Between September 21, 2000 and September 9, 2002 the Working Group convened 16 times. During the course of these meetings, members participated in two field tours and heard presentations by the project team and consultants on a number of topics, including Section 106, NEPA, state-designated natural areas, storm water management, the role of WILMAPCO (federal transportation planning agency) in SR 141 corridor developments, and existing and potential land use in the project area. Together they developed vision and mission statements, as well as goals and objectives, which served as guiding principles in the preparation and evaluation of various options. Their final recommendations, based on a consensus of 79 percent, were

presented to current Secretary of Transportation Nathan Hayward III on August 3, 2001. These recommendations and other measures to minimize impacts to historic properties under Section 106 consultation are reflected in the proposed intersection improvements.

### **6.3 Public Participation**

Under Section 106, DelDOT's program for public participation has been proactive and aggressive and will continue through engineering design and construction phases of the project. DelDOT, via FHWA, has convened numerous meetings with individual communities, stakeholder organizations and private property owners, and has communicated with the public through notices, newsletters, a project Web site ([www.rkkengineers.com/delldot/tmb](http://www.rkkengineers.com/delldot/tmb)), a variable message sign along SR 141, flyers, posters, e-flyers, handouts, and workshops.

DelDOT conducted three public workshops directly involving the SR 141/SR 100 Intersection area. The first public workshop was convened on March 1, 2002 as a part of the public involvement process for the larger SR 141: SR 100 to Alapocas Drive (Tyler McConnell Bridge) project. The workshop presented the project Purpose and Need, conceptual alternatives, a preliminary assessment of environmental resources, and alternatives recommended for further study. The second public workshop, convened on June 4, 2001, presented the assessment of alternatives, the findings of the draft environmental document, and a review of the Section 106 consultation process. The third workshop, convened on September 30, 2002, presented the proposed SR 141/SR 100 Intersection Improvements as a stand-alone project.

The public has been encouraged to comment throughout the planning process, and the response has been remarkable. The public workshops drew more than 150 attendees at the first and second and more than 70 people at the third workshop. DelDOT has also received hundreds of written comments and e-mail messages. An origination-destination traffic survey yielded more than 1,000 responses, and the project Web site has received over 100,000 hits.

Since the current undertaking does not directly impact historic resources in the area, public comments were more focused on how landscaping measures and other adjacent amenities (stone walls, sidewalks, stormwater, lighting) conform to the project area. Concerns expressed are not necessarily applicable to infrastructure upgrade impact on historic properties, but on how they appear along the roadway corridor and adjacent to historic properties. Individual consultation with church officials and property owners (historic or non-historic) has occurred and is best reflected in the transportation upgrades and other non-motorized enhancements.

## **7. References Cited**

Advisory Council on Historic Preservation (ACHP)

1992 Memorandum of Agreement Route 141 Project Between Montchanin Road and Concord Pike, Wilmington, Delaware. On file, Delaware State Historic Preservation Office, Dover.

Catts, Wade P., and Barbara M. Copp Everett

2001 Transportation Improvements Study S.R. 141/S.R. 100 to Alapocas Drive, Tyler McConnell Bridge, New Castle County, Delaware.

De Cunzo, Lu Ann, and Wade P. Catts

- 1990 *Management Plan for Delaware's Historical Archaeological Resources*. Center for Archaeological Research, Department of Anthropology, University of Delaware, Newark.

Everett, Barbara M. Copp

- 2001 Transportation Improvements Study S.R. 141/S.R. 100 to Alapocas Drive, Tyler McConnell Bridge, New Castle County, Delaware. Appendix V: Determination of Eligibility and State Survey Forms, 5 Old Barley Mill Road.

Kise Franks & Straw, Inc. (KFS)

- 1996 *HABS/HAER Documentation: Route 141, New Castle County, Delaware, Including: Charles I. du Pont House, St. Joseph's on the Brandywine, Concord Pike Milestone, Bird-Husbands House*. Submitted to the Delaware Department of Transportation, Dover.

Lichtenstein and Associates, Inc. (Lichtenstein)

- 1996 State Bridge No. 587, Tyler McConnell Bridge, Delaware Historic Bridge Survey. On file, Delaware State Historic Preservation Office, Dover.

Longworth, Joyce K., and Marjorie G. McNinch

- 1995 *The Church of Saint Joseph on the Brandywine, 1841-1994*. The Church, Greenville, Delaware.

National Register of Historic Places

- 1989 *National Register of Historic Places 1966-1988*. National Register of Historic Places, Washington, D.C.

Norton, J. M.

- 1976a St. Joseph's on the Brandywine, National Register Nomination. Prepared by the Division of Historical and Cultural Affairs, Dover. On file, Delaware State Historic Preservation Office, Dover.

Spero, P.A.C., and Company (Spero)

- 1991 *Delaware Historic Bridges Survey and Evaluation*. Delaware Department of Transportation Historic Architecture and Engineering Series No. 89, Dover.

Taylor, Randall K., Kimberly A. Snyder, Pamela Stephenson, Timothy A. Thompson, and Joan Walker

- 1989 *Archeological Investigations of the Proposed Dualization of Route 141 (Centre Road), from Route 100 (Montchanin Road) to U.S. 202 (Concord Pike), New Castle County, Delaware*. Delaware Department of Transportation Archeology Series No. 72, Dover.

Thompson, Priscilla

- 1986 *Architectural Assessment of the Route 141 Corridor Route 100 to U.S. 202, Leading to the Nemours Historic District, The Breck Mill Historic District (Henry Clay Village), and the Weldin House Determinations of Eligibilities to the National Register of Historic*



*Places, New Castle County, Delaware.* Delaware Department of Transportation Series No. 50. DelDOT, Dover.

U. S. Department of Transportation, Federal Highway Administration, and Delaware Department of Transportation (US DOT)

1992 *Environmental Assessment, S.R. 141, Montchanin Road (SR 100) to U. S. Route 202 (Concord Pike).*